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Remarks

In view of the following discussion, the applicants submit that none of the claims now pending in the application are obvious under the provisions of 35 U. S. C. § 103. Thus, the applicants believe that all of these claims are in allowable form.

REJECTIONS

A. 35 U. S. C. § 103

1. Claims 1-2 and 4-10 are not rendered obvious by Kawamura et al. in view of Udagawa

Claims 1-2 and 4-10 stand rejected under 35 U. S. C. § 103(a) as being unpatentable over Kawamura et al. (U. S. Patent 6,075,920 issued June 13, 2000) in view of Udagawa (U. S. Patent 5,706,261 issued on January 6, 1998). The applicants submit that these claims are not anticipated by the combination of these references.

Claim 1 is directed to a replay appliance for accessing information stored on a recording media (see, specification at page 2, lines 8-12). The replay appliance includes a scanning device, a search means and a comparator (see, specification at page 2, line 24 to page 3, line 10). The scanning device first scans the recording media (see, specification at page 4, lines 21-25). The search means then performs a binary search of the scanned recording medium based on a replay time (see, specification at page 4, lines 7-21). The comparator compares the replay time to a desired replay time and the scanning device scans information on the recording media at a point that corresponds to the result of the comparator to access information stored on the recording media at the defined playing time (see, specification at page 4, line 21 to page 6, line 2).

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Kawamura et al. describes an apparatus for recording and reproducing video data (see, Kawamura et al. at column 1, lines 7-11). In Kawamura et al., time code information is recorded at the head of each sector of the recording medium (see, Kawamura et al. at FIG. 2 and column 5, lines 49-67). A search is made based on a time code specified by a user (see, Kawamura et al. at column 14, lines 54-56). A control unit instructs a pickup to move to the sector of the recording medium where the time code specified by the user is located (see, Kawamura et al. at column 14, line 59 to column 15, line 15).

Kawamura et al. does not describe or suggest a replay appliance in which a scanning device first scans a recording media, then a search means performs a binary search of the scanned recording medium based on a replay time, a comparator compares the replay time to a desired replay time and the scanning device scans information on the recording media at a point that corresponds to the result of the comparator to access information stored on the recording media at the desired playing time. Rather, Kawamura et al. only teaches searching time code information recorded in each sector of a recording medium based on a time code specified by a user and moving a pickup to the sector of the recording medium where the time code specified by the user is located. Since Kawamura et al. does not teach use of a replay appliance in which a scanning device first scans a recording media, then a search means performs a binary search of the scanned recording medium based on a replay time, a comparator compares the replay time to a desired replay time and the scanning device scans information on the recording media at a point that corresponds to the result of the comparator to access information stored on the recording media at the desired playing time, claim 1 is patentable over Kawamura et al.

Udagawa describes physical recording locations on the disc and employs a binary search on a number of physical tracks for detecting the boundary between a recorded area and an unrecorded area on the write-once optical disc (see, Udagawa at column 2, lines 39-49). Udagawa does not describe or suggest a replay appliance in which a scanning device first scans a recording media, then

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a search means performs a binary search of the scanned recording medium based on a replay time, a comparator compares the replay time to a desired replay time and the scanning device scans information on the recording media at a point that corresponds to the result of the comparator to access information stored on the recording media at the desired playing time.

In fact, the present invention is considerably different from Kawamura in structure, function and purpose and that the cited reference neither alone nor in combination with newly cited reference Udagawa gives any hint to the present invention.

In particular, the inventor has realized that by employing a binary search a defined playing time may be properly accessed, even if a concordance list that correlates replay time with recording location is not available or the correspondence between the conventional reproduction passing time information (playing time) represented by hour, minute, second and the number of frames and a sector address on the recording medium cannot be calculated or varies if the bit rate of information or the compression varies.

Therefore, even if someone had some motivation to apply a binary search method disclosed by Udagawa on the added subcode information (time code at the accessed location on the medium), that combination would result in some totally different solution for different purposes than either the apparatus or methods described in the present application, which is based on the play time without a concordance list defining a relationship between replay time and recording point on the recording medium.

Claims 2 and 4-10 depend directly, or indirectly from claim 1. For the same reasons as described above for claim 1, claims 2 and 4-10 are also patentable over Kawamura et al. in view of Udagawa.

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2. Claims 3 and 11-12 are not obvious over Kawamura et al. in view of Carter et al.

Claims 3 and 11-12 stand rejected under 35 U. S. C. § 103(a) as being obvious over Kawamura et al. (U. S. Patent 6,075,920 issued June 13, 2000) in view of Carter et al. (U. S. Patent 5,845,331 issued December 1, 1998). The applicants submit that these claims are not rendered obvious by the combination of these references.

Claims 3 and 11-12 depend directly, or indirectly, from claim 1 which is directed to a replay appliance for accessing information stored on a recording media (see, specification at page 2, lines 8-12). The replay appliance includes a scanning device, a search means and a comparator (see, specification at page 2, line 24 to page 3, line 10). The scanning device first scans the recording media (see, specification at page 4, lines 21-25). The search means then performs a binary search of the scanned recording medium based on a replay time (see, specification at page 4, lines 7-21). The comparator compares the replay time to a desired replay time and the scanning device scans information on the recording media at a point that corresponds to the result of the comparator to access information stored on the recording media at the defined playing time (see, specification at page 4, line 21 to page 6, line 2).

Kawamura et al. describes an apparatus for recording and reproducing video data (see, Kawamura et al. at column 1, lines 7-11). In Kawamura et al., time code information is recorded at the head of each sector of the recording medium (see, Kawamura et al. at column 5, lines 49-67). A search is made based on a time code specified by a user (see, Kawamura et al. at column 14, lines 54-56). A control unit instructs a pickup to move to the sector of the recording medium where the time code specified by the user is located (see, Kawamura et al. at column 14, line 59 to column 15, line 15).

Kawamura et al. does not describe or suggest a replay appliance in which a scanning device first scans a recording media, then a search means performs

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a binary search of the scanned recording medium based on a replay time, a comparator compares the replay time to a desired replay time and the scanning device scans information on the recording media at a point that corresponds to the result of the comparator to access information stored on the recording media at the desired playing time. Rather, Kawamura et al. only teaches searching time code information recorded in each sector of a recording medium based on a time code specified by a user and moving a pickup to the sector of the recording medium where the time code specified by the user is located. Since Kawamura et al. does not teach use of a replay appliance in which a scanning device first scans a recording media, then a search means performs a binary search of the scanned recording medium based on a replay time, a comparator compares the replay time to a desired replay time and the scanning device scans information on the recording media at a point that corresponds to the result of the comparator to access information stored on the recording media at the desired playing time, claims 3 and 11-12 are patentable over Kawamura et al.

Carter et al. describes a memory system (see, Carter et al. at column 1, lines 61-63). The memory system includes shared memory for storing instructions and data (see, Carter et al. at column 1, line 66 to column 2, line 1). Access to the shared memory of the memory system is restricted by guarded pointers (see, Carter et al. at column 2, lines 2-17).

Carter et al. does not describe or suggest a replay appliance in which a scanning device first scans a recording media, then a search means performs a binary search of the scanned recording medium based on a replay time, a comparator compares the replay time to a desired replay time and the scanning device scans information on the recording media at a point that corresponds to the result of the comparator to access information stored on the recording media at the desired playing time. Rather, Carter et al. teaches a completely different arrangement in which access to a shared memory of a memory system is restricted by guarded pointers. Since Carter et al. does not teach use of a replay appliance in which a scanning device first scans a recording media, then a

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search means performs a binary search of the scanned recording medium based on a replay time, a comparator compares the replay time to a desired replay time and the scanning device scans information on the recording media at a point that corresponds to the result of the comparator to access information stored on the recording media at the desired playing time, claims 3 and 11-12 are patentable over Carter et al.

Furthermore, since Kawamura et al. only teaches searching time code information recorded in each sector of a recording medium based on a time code specified by a user and moving a pickup to the sector of the recording medium where the time code specified by the user is located and Carter et al. only teaches an arrangement in which access to a shared memory of a memory system is restricted by guarded pointers, the combination of these references does not describe or suggest applicant's arrangement recited in claims 3 and 11-12. In particular, claims 3 and 11-12 recite a replay appliance in which a scanning device first scans a recording media, then a search means performs a binary search of the scanned recording medium based on a replay time, a comparator compares the replay time to a desired replay time and the scanning device scans information on the recording media at a point that corresponds to the result of the comparator to access information stored on the recording media at the desired playing time. Thus, claims 3 and 11-12 are patentable over the combination of these references.

CONCLUSION

Thus, the applicants submit that none of the claims, presently in the application, are obvious under the provisions of 35 U. S. C. § 103. Consequently, the applicants believe that all of the claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

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If, however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, it is requested that the Examiner telephone Ms. Patricia A. Verlangieri, at (609) 734-6867, so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,



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